CAPTAIN
California Autism Professional Training and Information Network

Boot Camp

Presented by
CAPTAIN Leadership

Welcome New Cadre Members!

Cadre members:

- Nominated by SELPAs, Regional Centers, and Family Resource/Family Empowerment Centers

- Will receive training through our annual summit

- Will learn about the NPDC-ASD and CAPTAIN training materials

- Will assist with the statewide distribution of the EBPs by providing support and training locally

What is CAPTAIN?

CAPTAIN is a multiagency network developed to support the understanding and use of Evidence-Based Practices for individuals affected by Autism Spectrum Disorder across the state.

CAPTAIN Video
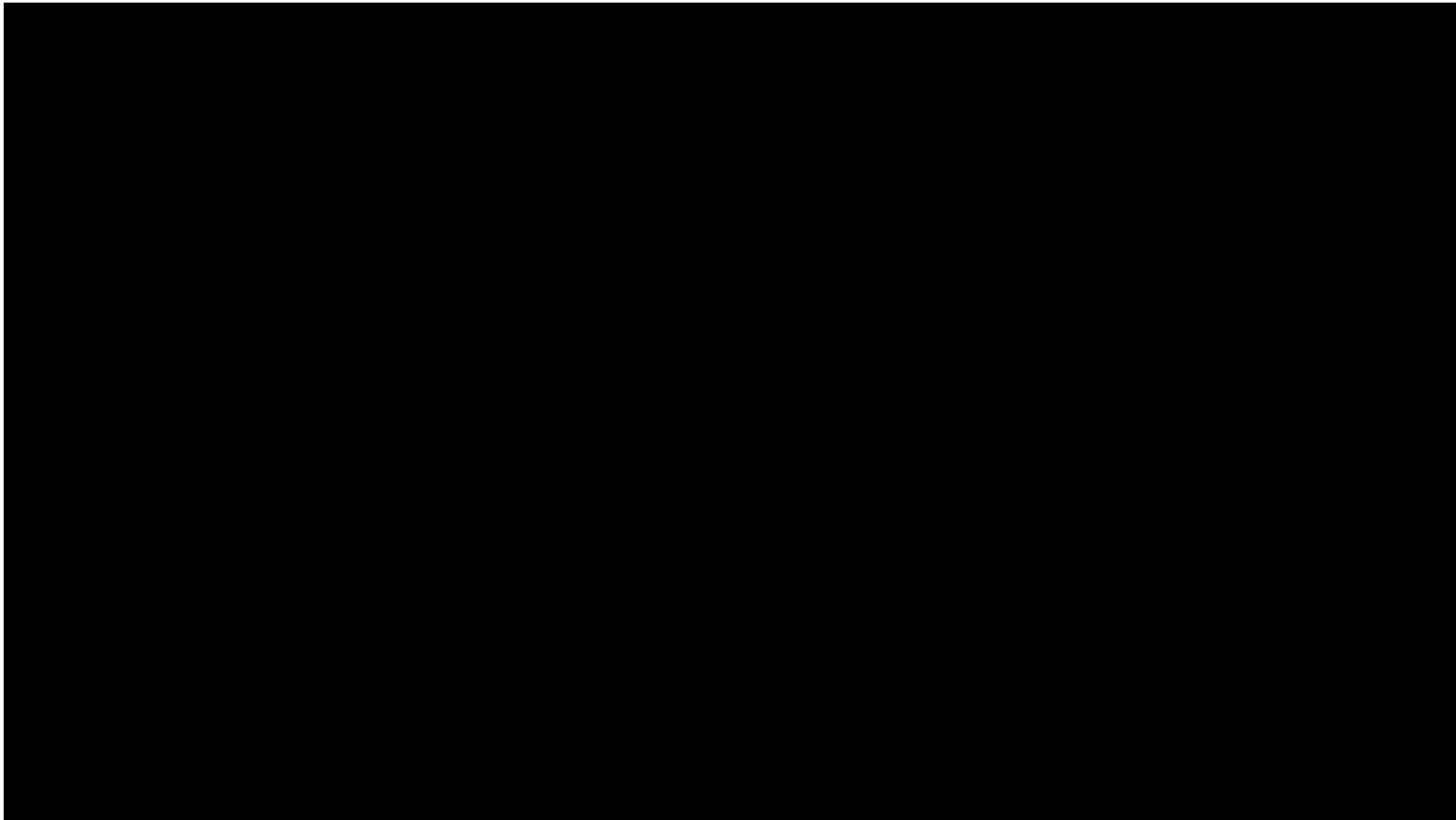
CAPTAIN Vision

Develop a statewide training and technical assistance network with a focus on

Evidence-Based Practices

for individuals impacted by **ASD**

inclusive of stakeholder agencies who will disseminate information at a local level.

CAPTAIN Goals

Goal 1: Increase knowledge about ASD and EBPs through <u>systematic dissemination</u> of information

Goal 2: Increase <u>implementation and fidelity</u> of EBPs in schools and communities

Goal 3: Increase <u>interagency collaborations</u> to leverage resources and standardize a process for using EBPs

All Cadre Must..

- Complete "ASD Across the Lifespan" online class through Coursera (New members only)

- Complete annual CAPTAIN online survey

- Participate in annual CAPTAIN Summit

- Participate in local CAPTAIN collaborative meetings/activities to implement local plans (at least quarterly)

What are Evidence-Based Practices?

- Are practices for which there is scientifically-based research that demonstrates efficacy for individuals with ASD

- Rely on the application of rigorous, systematic, and objective procedures to obtain reliable and valid knowledge for intervention and educational activities and programs

NPDC Definition of EBP:

THE NATIONAL PROFESSIONAL DEVELOPMENT CENTER ON
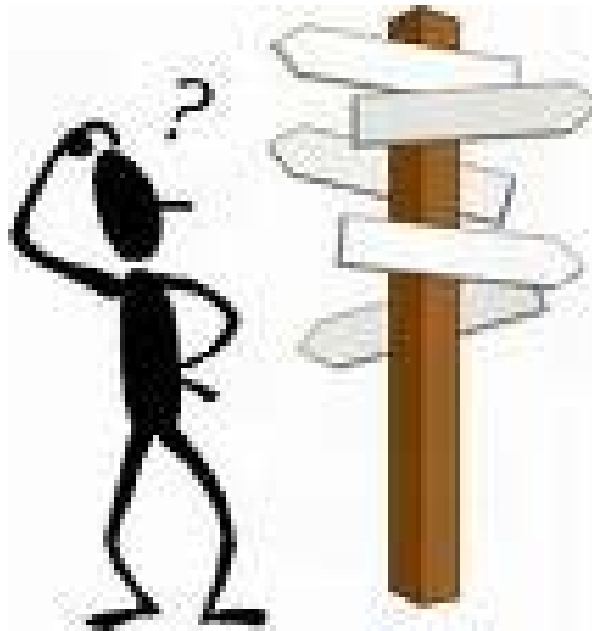**AUTISM SPECTRUM DISORDERS**

"Focused intervention practices that have substantial evidence for effectiveness in promoting positive outcomes for learners with ASD"

Why Evidence Based Practices?

- Treatments for ASD are more diverse than any other known disability

- Treatment claims range from amelioration to recovery

- Many interventions with little or no scientific evidence are recommended for individuals with ASD

How many results do you think you would get if you did a Google search for:

"AUTISM TREATMENT"?

Knowing of these EBPs:

– helps us know which treatments have evidence of effectiveness and which treatments do not

– allows us to make informed decisions when we select treatments

– provides us with the opportunity to support individuals with ASD in reaching their full potential
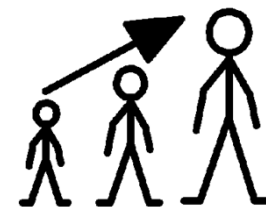
Why Use Evidence Based Practices?

- Because many state and federal laws, mandates, education code exist that require us to use evidence-based practices based on peer-reviewed research.

- For example……..

IDEA 2004 * Sec. 300.320
Definition of Individualized Education Program……

,,,,,(4) A statement of the special education and related services and supplementary aids and services, **based on peer-reviewed research** to the extent practicable, to be provided to the child, or on behalf of the child, and a statement of the program modifications or supports for school personnel that will be provided to enable the child--

(i) To advance appropriately toward attaining the annual goals;

(ii) To be involved in and make progress in the general education curriculum in accordance with paragraph (a)(1) of this section, and to participate in extracurricular and other nonacademic activities; and

(iii) To be educated and participate with other children with disabilities and nondisabled children in the activities described in this section;…….

IDEA 2004
Part C: Infants and Toddlers with Disabilities

SEC. 635. REQUIREMENTS FOR STATEWIDE SYSTEM

(a) In General.--A statewide system described in section 633 shall include, at a
minimum, the following components:

(2) A State policy that is in effect and that ensures that appropriate **early
intervention services based on scientifically based research**, to the extent
practicable, are available to all infants and toddlers with disabilities and their families,
including Indian infants and toddlers with disabilities and their families residing on a
reservation geographically located in the State and infants and toddlers with
disabilities who are homeless children and their families.

SEC. 636. INDIVIDUALIZED FAMILY SERVICE PLAN

(d) Content of Plan.--The individualized family service plan shall be in writing and
contain--

(4) a statement of specific **early intervention services based on peer-reviewed
research**, to the extent practicable, necessary to meet the unique needs of the infant
or toddler and the family, including the frequency, intensity, and method of delivering
services;

Every Student Succeeds Act
(ESSA)
S.1177-290

(21) **EVIDENCE-BASED.—**

   (A) IN GENERAL.—Except as provided in subparagraph

(B), the term **'evidence-based',** when used with respect to a State, local educational agency, or school activity, **means an activity, strategy, or intervention that—**

   (i) **demonstrates a statistically significant effect on improving student outcomes or other relevant outcomes based on**—

      I) **strong evidence** from at least 1 well designed and well-implemented experimental study;

      II) **moderate evidence** from at least 1 well designed and well-implemented quasi-experimental study; or

      (III) **promising evidence** from at least 1 well designed and well-implemented correlational study with statistical controls for selection bias; or

       (ii)(I) demonstrates a rationale **based on high quality research findings** or positive evaluation that such activity, strategy, or intervention is likely to improve student outcomes or other relevant outcomes; and

          (II) includes ongoing efforts to examine the effects of such activity, strategy, or intervention.

CA ED CODE 56345

(4) A statement of the special education and related services and supplementary aids and services, based on **peer-reviewed research** to the extent practicable, to be provided to the pupil, or on behalf of the pupil, and a statement of the program modifications or supports for school personnel that will be provided to enable the pupil to do the following:

(A) To advance appropriately toward attaining the annual goals.

(B) To be involved in and make progress in the general education curriculum in accordance with paragraph (1) and to participate in extracurricular and other nonacademic activities.

(C) To be educated and participate with other individuals with exceptional needs and nondisabled pupils in the activities described in this subdivision.

The Lanterman Developmental Disabilities Act

- Is a California law passed in 1969, that gives people with developmental disabilities the right to services and supports that enable them to live a more independent and normal life

- The Lanterman Act is codified in the Welfare and Institutions Code and has been amended several times since its passage, including…

Welfare & Institutions Code 4686.2(b)

Effective July 1, 2009… regional centers shall:

*(1) Only purchase ABA services or intensive behavioral intervention services that reflect **evidence–based practices**, promote positive social behaviors, and ameliorate behaviors that interfere with learning and social interactions…"*

Health and Safety Code Section 1374.73

(c) (1)(C) (iii) Provides intervention plans that utilize **evidence-based practices**, with demonstrated clinical efficacy in treating pervasive developmental disorder or autism.

EBPs Are Aligned with These Initiatives, too!
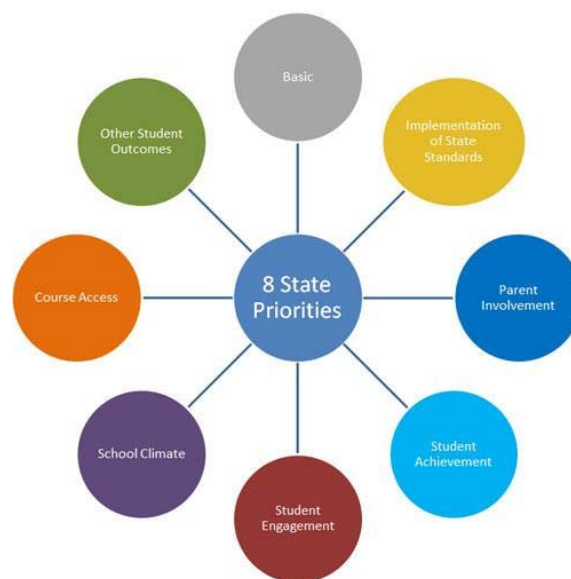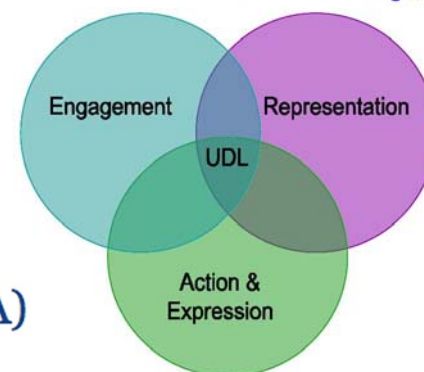
Implementing EBPs Aligns With UDL

The principles of Universal Design for Learning (UDL) provide a framework for educators to use:

- multiple ways to teach the content
- multiple ways for students to demonstrate knowledge
- multiple ways to engage ALL learners

NATIONAL CENTER ON UNIVERSAL DESIGN *for* LEARNING

Using UDL Frameworks & EBPs for Autism

- There are more than 112, 318 students with ASD in CA Public Schools and that number is steadily growing which is 14.5% of total special education population (CDE, 2017)

- More than half of students with ASD have cognition in the average range (CDC, 2016)

- 40% are nonverbal

- Students with ASD can be supported in accessing the general education curriculum and the CA State Standards with the use of UDL and EBPs for Autism

EBPs for ASD in the UDL Guidelines

Flexibility in Presentation
- Visual Supports
- Technology Aided Instruction
- Video Modeling

Flexibility in Expression
- Visual Supports
- Technology Aided Instruction
- PECS/AAC

Flexibility in Engagement
- Reinforcement Systems
- Antecedent Based Interventions
- Peer Mediated Instruction
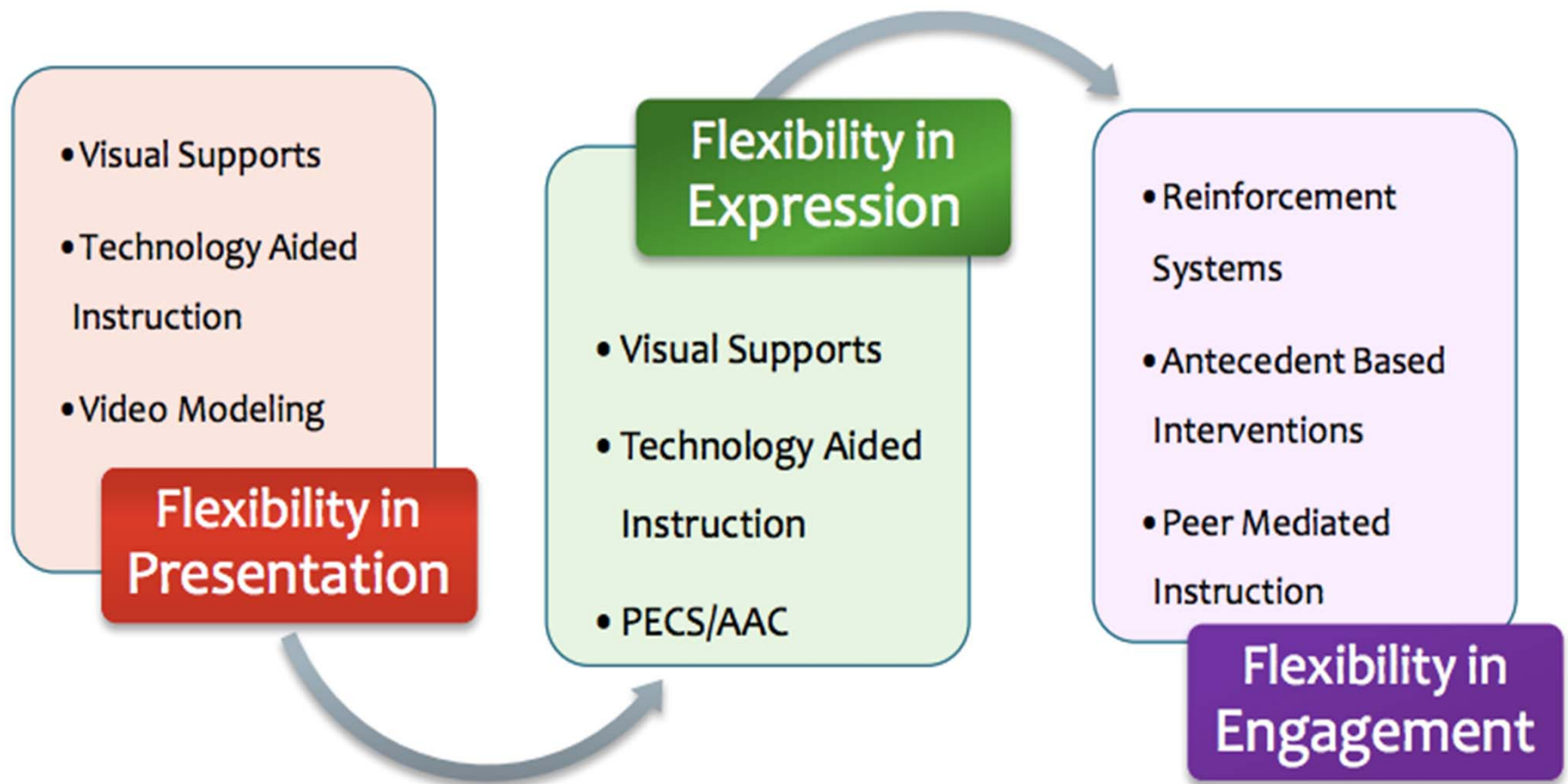
Aligning with UDL

INFOGRAPHIC ON CAPTAIN WEBSITE

www.captain.ca.gov

Using Universal Design for Learning (UDL) Guidelines & Evidence Based Practices for Autism

CAPTAIN — California Autism Professional Training and Information Network

Why?

- There are 104,573 students with ASD in CA Public Schools and that number is steadily growing (CDE, 2017)
- More than half of students with ASD have cognition in the average range (CDC, 2016)
- Students with ASD can be supported in accessing the General Education Curriculum and the CA State Standards with the use of Universal Design for Learning (UDL) and Evidence Based Practices (EBPs) for Autism

EBPs for ASD in the UDL Guidelines:

Flexibility in Engagement
- Reinforcement
- Antecedent Based Intervention
- Self Management

Flexibility in Expression
- Visual Support
- Technology-Aided Instruction
- PECS/AAC

Flexibility in Presentation
- Visual Support
- Technology-Aided Instruction
- Video Modeling
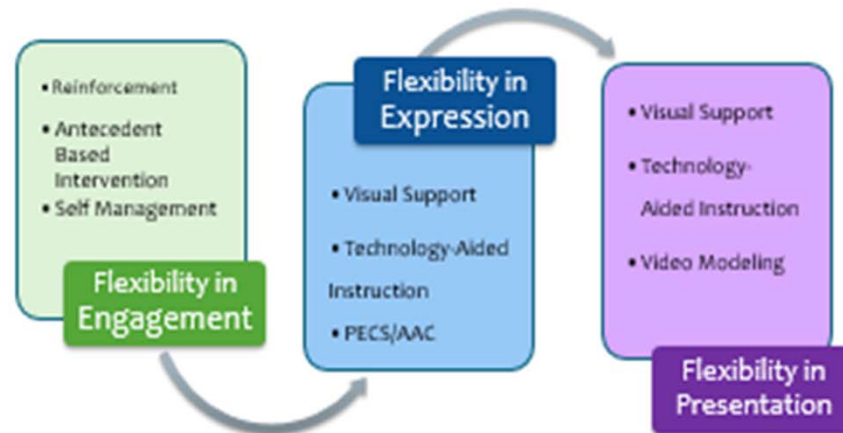
To learn more about the EBPs for Autism visit: www.captain.ca.gov or participate in the free online learning modules at: http://afirm.fpg.unc.edu
Find resources and learn more about UDL through CAST: http://www.cast.org

Kirsten Yeates
Leslie Comstock
Ann England
Patty Schetter

CAPTAIN Aligns with MTSS

California's Multi-Tiered System of Support is an integrated, comprehensive framework that aligns academic, behavioral, and social-emotional learning in a fully integrated system of support for the benefit of all students.

CAPTAIN Aligns with PBIS

(Evidence Based Practices for Behavior)

INFOGRAPHIC ON CAPTAIN WEBSITE

www.captain.ca.gov

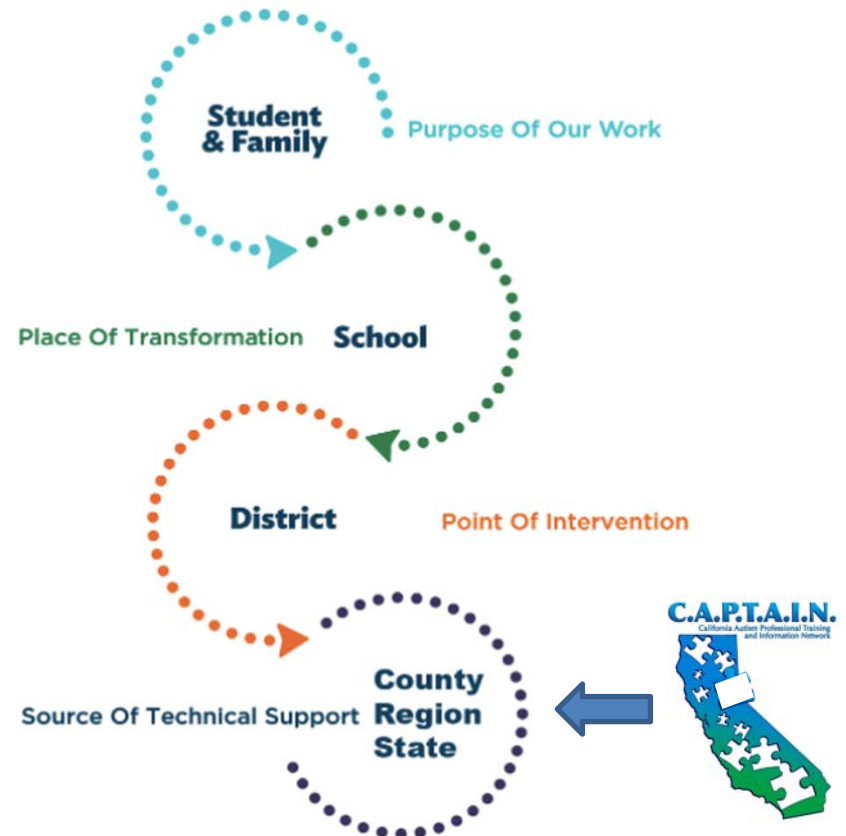| EBPs for Behavior*	EBPs for ASD*
Effectively design the physical environment of the classroom; maximize structure in classroom.	✓ Antecedent Based Interventions ✓ Visual Supports
Develop and teach predictable classroom routines Post, teach, review, monitor, and reinforce a small number of positively stated expectations.	✓ Visual Supports ✓ Task Analysis ✓ Reinforcement
Use active supervision and proximity. Prompt or remind students of expected behavior	✓ Antecedent Based Interventions ✓ Prompting
Establish a continuum of strategies to acknowledge appropriate behavior.	✓ Reinforcement
Make the problem behavior irrelevant with anticipation and reminders.	✓ Antecedent Based Interventions ✓ Self-Management ✓ Exercise ✓ Cognitive Behavior Intervention
Establish a continuum of strategies to respond to inappropriate behavior.	✓ Differential Reinforcement of Alternative, Incompatible or Other Behavior ✓ Response Interruption/Redirection ✓ Extinction
Help student learn appropriate behaviors	✓ Social Skills Training ✓ Structured Play Group ✓ Functional Communication Training ✓ Discrete Trial Training ✓ Modeling ✓ PECS ✓ Pivotal Response Training ✓ Scripting ✓ Social Narratives ✓ Video Modeling ✓ Parent-Implemented Intervention
Determine the function of the behavior to select a FERB (Functional Equivalent Replacement Behavior)	✓ Functional Behavior Assessment ✓ Functional Communication Training
Expectations and behavioral skills are taught and recognized in the natural context	✓ Naturalistic Instruction ✓ Pivotal Response Training
Provide a range of evidence based practices that promote active engagement in the classroom	✓ Technology-Aided Instruction and Intervention ✓ Peer-Mediated Instruction and Intervention ✓ Antecedent Based Interventions (e.g., Special Interests)
www.captain.ca.gov	England/Schetter

2 IMPORTANT EBP RESOURCES

National Professional Development Center (NPDC)	National Autism Center (NAC)
1. **27 Evidence Based Practices** 2. **AFIRM** 3. **CSESA** 4. **EBPs for Young Children** **Released** **March 2014**	1. **National Standards Project Report-Phase 2** **NSP2** **Released** **April 2015**
http://autismpdc.fpg.unc.edu http://afirm.fpg.unc.edu http://csesa.fpg.unc.edu http://asdtoddler.fpg.unc.edu www.captain.ca.gov	www.nationalautismcenter.org www.captain.ca.gov

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Systematic Reviews of the Literature for Evidence Based Practices (EBPs)

- 775 research studies reviewed by National Standards Project from National Autism Center, Phase 1 (NSP1)

- Included research for the years: 1957-2007

- In 2009, identified 11 Established Treatments

The National Autism Center's

National Standards Report

THE NATIONAL STANDARDS PROJECT—
ADDRESSING THE NEED FOR EVIDENCE-
BASED PRACTICE GUIDELINES FOR
AUTISM SPECTRUM DISORDERS

nac.
National Autism Center
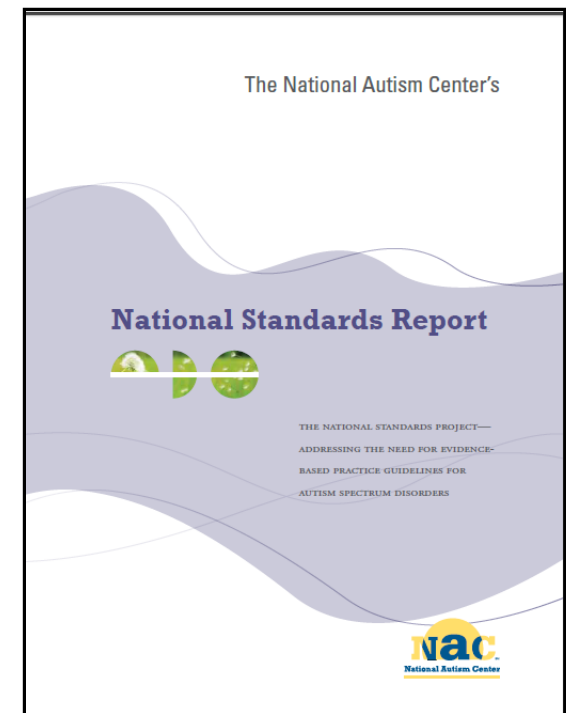
Systematic Reviews of the Literature for Evidence Based Practices (EBPs)

- **2nd** Review by National Standards Project, National Autism Center, Phase 2 (NSP2)
- 351 articles (ages 0-22) and 27 articles (ages 22+)
- Included studies if the interventions could be implemented in or by school systems, early intervention, home, hospital, vocational. and/or community-based programs or in clinic settings
- Reviewed studies published in peer reviewed journals between 2007 and February of 2012
- In 2015, 14 Established Interventions Under Age 22; 1 Established Intervention Age 22+

Findings and Conclusions: National Standards Project,

Phase 2

ADDRESSING THE NEED FOR EVIDENCE-BASED PRACTICE GUIDELINES FOR AUTISM SPECTRUM DISORDER

National Autism Center
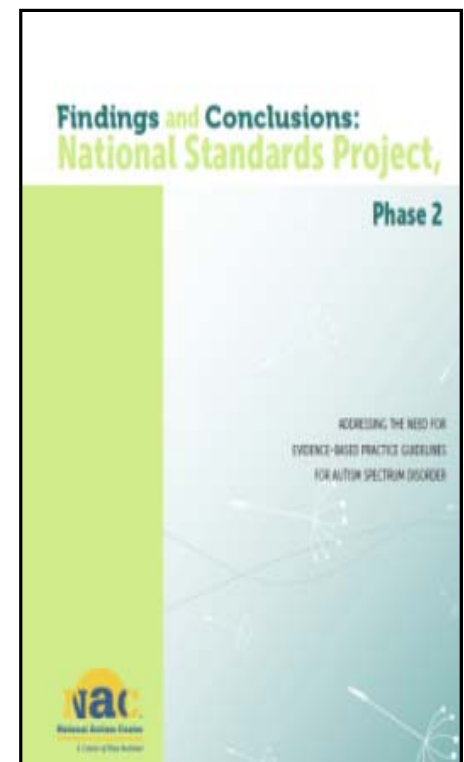
Systematic Reviews of the Literature for Evidence Based Practices (EBPs)

- 175 research studies reviewed by National Professional Development Center (NPDC)

- Included research for the years: 1997-2007

- In 2010, identified 24 EBPs

Evidence-Based
Practices for
Children, Youth,
and Young Adults
with
Autism Spectrum Disorder

Connie Wong, Samuel L. Odom,
Kara Hume, Ann W. Cox, Angel Fettig,
Suzanne Kucharczyk, Matthew E. Brock,
Joshua B. Plavnick, Veronica P. Fleury, and Tia R. Schultz

Autism Evidence-Based Practice Review Group
Frank Porter Graham Child Development Institute
University of North Carolina at Chapel Hill

http://autismpdc.fpg.unc.edu/

The National Standards Project-Phase 2 (NSP2)
Overall Findings for Individuals Under Age 22

- 14   Established Interventions

- 18 Emerging Interventions

- 13 Unestablished Interventions

nac National Autism Center
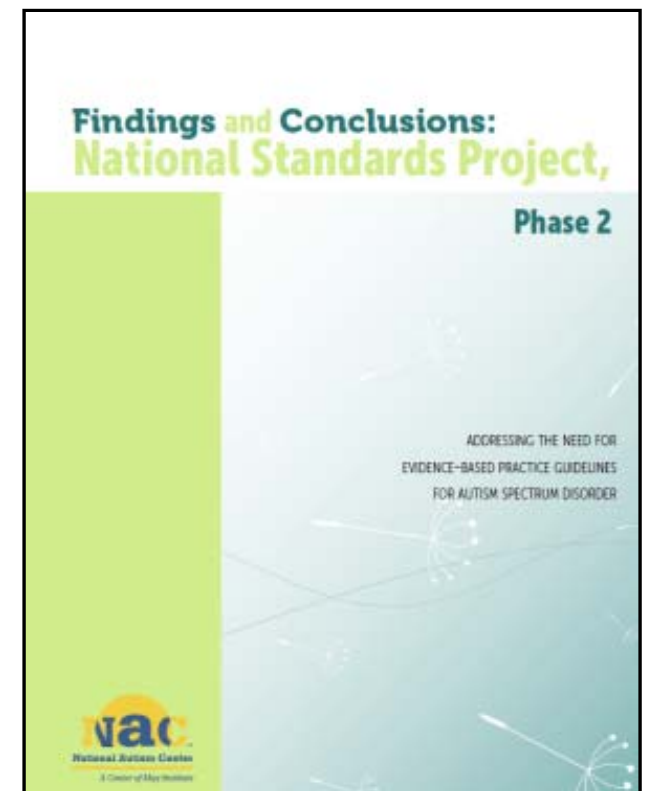
The following interventions have been identified as falling into the Established level of evidence:

- Behavioral Interventions
- Cognitive Behavioral Intervention Package
- Comprehensive Behavioral Treatment for Young Children
- Language Training (Production)
- Modeling
- Natural Teaching Strategies
- Parent Training
- Peer Training Package
- Pivotal Response Training
- Schedules
- Scripting
- Self-Management
- Social Skills Package
- Story-based Intervention

14 ESTABLISHED INTERVENTIONS
(for individuals under age 22)

Findings and Conclusions:
National Standards Project,

Phase 2

ADDRESSING THE NEED FOR
EVIDENCE-BASED PRACTICE GUIDELINES
FOR AUTISM SPECTRUM DISORDER

nac
National Autism Center
A Center of May Institute

The following interventions have been identified as falling into the Emerging level of evidence:

- Augmentative and Alternative Communication Devices
- Developmental Relationship-based Treatment
- Exercise
- Exposure Package
- Functional Communication Training
- Imitation-based Intervention
- Initiation Training
- Language Training (Production & Understanding)
- Massage Therapy
- Multi-component Package
- Music Therapy
- Picture Exchange Communication System
- Reductive Package
- Sign Instruction
- Social Communication Intervention
- Structured Teaching
- Technology-based Intervention
- Theory of Mind Training

18 EMERGING INTERVENTIONS (for individuals under age 22)
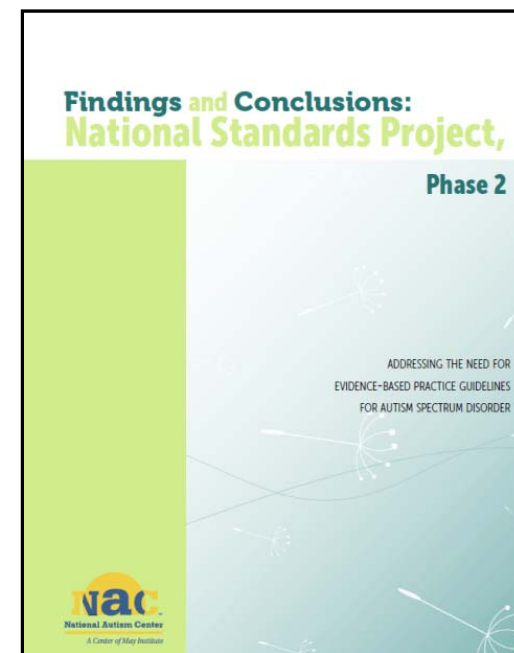
Findings and Conclusions: National Standards Project,

Phase 2

ADDRESSING THE NEED FOR EVIDENCE-BASED PRACTICE GUIDELINES FOR AUTISM SPECTRUM DISORDER

nac.
National Autism Center
A Center of May Institute

The following interventions have been identified as falling into the Unestablished level of evidence:

- Animal-assisted Therapy
- Auditory Integration Training
- Concept Mapping
- DIR/Floor Time
- Facilitated Communication
- Gluten-free/Casein-free diet
- Movement-based Intervention
- SENSE Theatre Intervention
- Sensory Intervention Package
- Shock Therapy
- Social Behavioral Learning Strategy
- Social Cognition Intervention
- Social Thinking Intervention

13 UNESTABLISHED INTERVENTIONS
(for individuals under age 22)

Findings and Conclusions: National Standards Project, Phase 2

ADDRESSING THE NEED FOR EVIDENCE-BASED PRACTICE GUIDELINES FOR AUTISM SPECTRUM DISORDER

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National Autism Center
A Center of May Institute

NSP2 Example

Modeling

Established Intervention

One of the most effective ways to teach someone what to do is to show him or her how to do it. The goal of modeling is to correctly demonstrate a target behavior to the person learning the new skill, so that person can then imitate the model. Children can learn a great deal from observing the behavior of parents, siblings, peers, and teachers, but they often need to be taught what behaviors should be imitated.

Basic Facts

Number of articles reviewed:

NSP1 = 51   NSP2 = 28

Effective ages: Children and adolescents 3-18 years

Skills increased:
- higher cognitive functions (NSP1)
- academic (NSP2)
- communication, interpersonal, personal responsibility, and play (NSP1&2)

Behaviors decreased:
- problem behaviors (NSP1)
- sensory or emotional regulation (NSP1)

Detailed Description

There are two types of modeling—live and video modeling.

Live modeling occurs when a person demonstrates the target behavior in the presence of the child with autism spectrum disorder (ASD). When providing live modeling:
- Clearly outline, in writing, the target behavior to model.
- Ensure all individuals modeling the target behavior are doing so in a consistent manner. It may be helpful for parents/caregivers/therapists to practice together to make certain each person provides the same model.
- Obtain the child's attention prior to modeling the target behavior.
- Develop a plan to fade or stop the use of modeling to encourage the child to independently display the target behavior.

Video modeling occurs when you pre-record a person demonstrating the target behavior. Video modeling can be a great option for children/adolescents with an affinity for television shows, movies, or interest in seeing themselves on a monitor (i.e., television screen, computer monitor, video recorder monitor). Some children/adolescents may enjoy assisting in the production of the video.

Research Findings for Adults (22+ Years)

Established Interventions for Adults

The only intervention to be identified as Established for individuals ages 22 years and older is Behavioral Interventions. The Behavioral Intervention category consists of applied behavior analytic interventions to increase adaptive behaviors and decrease challenging behaviors. Examples of specific strategies identified in the 17 articles supporting Behavioral Interventions are provided in the table on the following page.

Only 1 Established

Emerging Interventions for Adults

Emerging Interventions are those for which one or more studies suggest they may produce favorable outcomes. However, before we can be fully confident that the interventions are effective, additional high quality studies are needed that consistently show these interventions to be effective for individuals with ASD. Based on the available evidence, we are not yet in a position to rule out the possibility that Emerging Interventions are, in fact, not effective.

The following intervention has been identified as falling into the Emerging level of evidence:

◀ Vocational Training Package

Unestablished Interventions for Adults

Unestablished Interventions are those for which there is little or no evidence in the scientific literature that allows us to draw firm conclusions about their effectiveness with individuals with ASD. There is no reason to assume these interventions are effective. Further, there is no way to rule out the possibility these interventions are ineffective or harmful.

The following interventions have been identified as falling into the Unestablished level of evidence:

◀ Cognitive Behavioral Intervention Package

◀ Modeling

◀ Music Therapy

◀ Sensory Integration Package

Another Resource for Older Individuals with ASD

National Professional Development Center

In 2014, 27 EBPs:

- 2nd review by NPDC (Mar 2014)
- Included 22 years, 1990-2011
  - 29,101 possible studies ➔ 456 studies
  - RCT, quasi-experimental, single case design
- Strength of evidence for assessment
- Based on number & type of studies using each EBP

http://autismpdc.fpg.unc.edu/node/21

Evidence-Based
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NPDC Criteria for EBP

THE NATIONAL PROFESSIONAL DEVELOPMENT CENTER ON
AUTISM SPECTRUM DISORDERS

To be considered an EBP for individuals with ASD, efficacy must be established through peer-reviewed research in scientific journals with:

At least two high quality experimental or quasi-experimental group design articles conducted by at least two different researchers or research groups

OR

At least five high quality single case design articles conducted by at least three different researchers or research groups having a total of at least 20 participants across studies

OR

A combination of at least one high quality experimental or quasi-experimental group design article and at least three high quality single case design articles conducted by at least two different research groups

WHAT CRITERIA DETERMINED IF AN INTERVENTION WAS EFFECTIVE?

Randomized or Quasi-experimental Design Studies

2

Single-subject Design Studies

5

Criteria for Qualification As An Evidence-based Practice

Combination of Evidence

1 + 3

27 Evidence – Based Practices (2014)

Antecedent-based interventions

Cognitive behavioral intervention

Differential reinforcement

Discrete trial training

Exercise

Extinction

Functional behavior assessment

Functional communication training

Modeling

Naturalistic interventions

Parent-implemented intervention

Peer-mediated instruction/intervention

Picture Exchange Communication System™

Pivotal response training

Prompting

Reinforcement

Response interruption/redirection

Scripting

Self-management

Social narratives

Social skills training

Structured play groups

Task analysis

Technology-aided intervention/instruction

Time delay

Video modeling

Visual supports

23 of 27 EBPs Were Researched In School Based Settings

1. ABI (15 studies)
2. DRO (3 studies)
3. DTT (2 studies)
4. ECE (3 studies)
5. EXT (2 studies)
6. FBA (5 studies)
7. FCT (3 studies)
8. MD (1 study)
9. NI (1 study)
10. PMII (10 studies)
11. PECS (3 studies)

12. PP (9 studies)
13. PRT (4 studies)
14. R+ (8 studies)
15. SM (3 studies)
16. SN (10 studies)
17. SST (5 studies)
18. SPG (2 studies)
19. TA (3 studies)
20. TAII (9 studies)
21. TD (5 studies)
22. VM (9 studies)
23. VS (10 studies)

4 EBPS not yet researched in school settings:
CBI, PII, RIR, SC

Fact Sheets Available for All of the 27 EBPs

Video Modeling
Fact Sheet

Brief Description

Video modeling (VM) is a method of instruction that uses video recording and display equipment to provide a visual model of the targeted behavior or skill. The model is shown to the learner, who then has an opportunity to perform the target behavior, either in the moment or at a later point in time. Types of video modeling include basic video modeling, video self-modeling, point-of-view video modeling, and video prompting. *Basic video modeling* is the most common and involves recording someone besides the learner engaging in the target behavior or skill. *Video self-modeling* is used to record the learner displaying the target skill or behavior and may involve editing to remove adult prompts. *Point-of-view video modeling* is when the target behavior or skill is recorded from the perspective of what the learner will see when he or she performs the response. *Video prompting* involves breaking the behavior into steps and recording each step with incorporated pauses during which the learner may view and then attempt a step before viewing and attempting subsequent steps. Video prompting can be implemented with other, self, or point-of-view models. Video modeling strategies have been used in isolation and also in conjunction with other intervention components such as prompting and reinforcement strategies.

Qualifying Evidence

VM meets evidence-based criteria with 1 group design and 31 single case design studies.

Ages

According to the evidence-based studies, this intervention has been effective for toddlers (0-2 years) to young adults (19–22) years with ASD.

Outcomes

VM can be used effectively to address social, communication, behavior, joint attention, play, cognitive, school-readiness, academic, motor, adaptive, and vocational skills.

Research Studies Poviding Evidence

Akmanoglu, N., & Tekin-Iftar, E. (2011). Teaching children with autism how to respond to the lures of strangers. *Autism, 15*(2), 205-222. doi: 10.1177/1362361309352180

Allen, K. D., Wallace, D. P., Greene, D. J., Bowen, S. L., & Burke, R. V. (2010). Community-based vocational instruction using videotaped modeling for young adults with autism spectrum disorders performing in air-inflated mascots. *Focus on Autism and Other Developmental Disabilities, 25*(3), 186-192. doi: 10.1177/1088357610377318

Evidence-Based Practices for Children, Youth, and Young Adults with Autism Spectrum Disorder — 101

- Definition of the intervention
- Age range of participants
- Type of outcomes it has generated
- Citations for the specific articles that provide the evidence for the efficacy of the practice

Evidence-Based Practices Identified by the National Professional Development Center (NPDC) on ASD	Established Treatments Identified by the National Standards Project (NSP)													
	Behavioral Interventions	Cognitive Behavioral Interventions	Modeling	Natural Teaching Strategies	Parent Training	Peer Training Package	Pivotal Response Training	Schedules	Scripting	Self-management	Social Skills Package	Story-based Intervention	Language Training	Comprehensive Behavioral Treatment for Young Children
Antecedent-based Intervention	X												Language training did not emerge as a focused intervention by the NPDC on ASD. Components of Language Training overlap with NPDC identified practices that may support language production, such as modeling, prompting, and reinforcement.	The NPDC on ASD did not review comprehensive treatment models. Components of The Comprehensive Behavioral Treatment of Young Children overlap with many NPDC identified practices.
Differential Reinforcement	X													
Discrete Trial Training	X													
Extinction	X													
Modeling	X		X											
Prompting	X													
Reinforcement	X													
Response Interruption/Redirection	X													
Scripting	X								X					
Task Analysis	X													
Video Modeling	X		X											
Time Delay	X													
Cognitive Behavioral Intervention		X												
Naturalistic Intervention				X										
Parent Implemented Intervention					X									
Peer-mediated Instruction & Intervention						X								
Pivotal Response Training							X							
Self-management										X				
Social Narratives												X		
Social Skills Training											X			
Visual Supports								X						
Exercise	Exercise was identified as an emerging practice by the NSP.													
Functional Behavior Assessment	The NSP did not consider Functional Behavior Assessment as a category of evidence-based practice.													
Functional Communication Training	Functional Communication Training was identified as an emerging practice by the NSP.													
Picture Exchange Communication System	Picture Exchange Communication System was identified as an emerging practice by the NSP.													
Structured Play Groups	The NSP did not consider Structured Play Groups as a category of evidence-based practice.													
Technology-aided Instruction & Intervention	Technology-aided Instruction and Intervention was identified as an emerging practice by the NSP.													

How to Select EBPs?
CAPTAIN Recommends:

- Use 27 EBPs from NPDC

- Use 14 Established Interventions for Ages 0-22 from NAC

- Use 1 Established Intervention for Ages 22+ from NAC

National Clearinghouse on Autism Evidence and Practice

Will Review Research 2012-2017

Give Now

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BRIDGING PRACTICE AND SCIENCE

The National Clearinghouse on Autism Evidence and Practice (NCAEP) is conducting a systematic review of the current intervention literature targeting individuals on the autism spectrum. NCAEP is a continuation of the evidence review that was completed by the National Professional Development Center on Autism Spectrum Disorders (NPDC) which included research published through 2011. We will review research studies published in the last five years (2012-2017) which examine the impact of behavioral, educational, clinical and developmental practices and service models used with individuals on the autism spectrum from birth through age 21.

Learn More

http://ncaep.fpg.unc.edu/
www.captain.ca.gov

National Clearinghouse on Autism Evidence and Practice

↗ National Clearinghouse on Autism Evidence and Practice (NCAEP) was formed with the purpose of providing a continuation of the NPDC critical reviews

↗ NCAEP will review research studies published in the last five years (2012-2017) which examine the impact of behavioral, educational, clinical and developmental practices and service models used with individuals on the ASD from birth through age 21

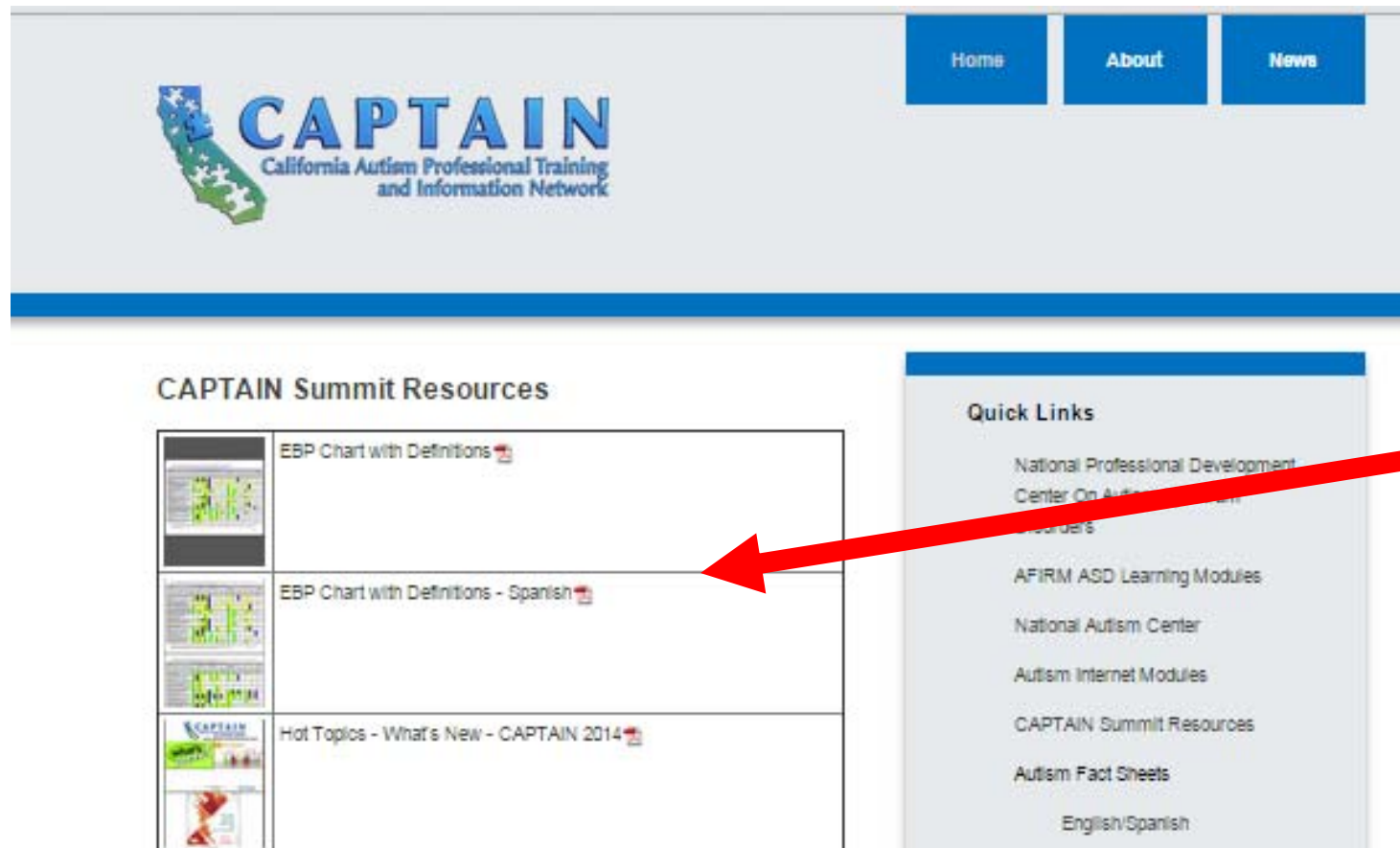## Hopes to publish a report in 2018

Selecting an EBP

- EBPs are used to advance goals which are tied to standards

- Ask: What is our goal/objective targeting?

  - Consider the specific IEP goals and related objectives

- Ask: What are our options?

  - Look at the domain that the specific goal relates to

27 EBPs Matrix
Available on the CAPTAIN Website
English and Spanish!

www.captain.ca.gov

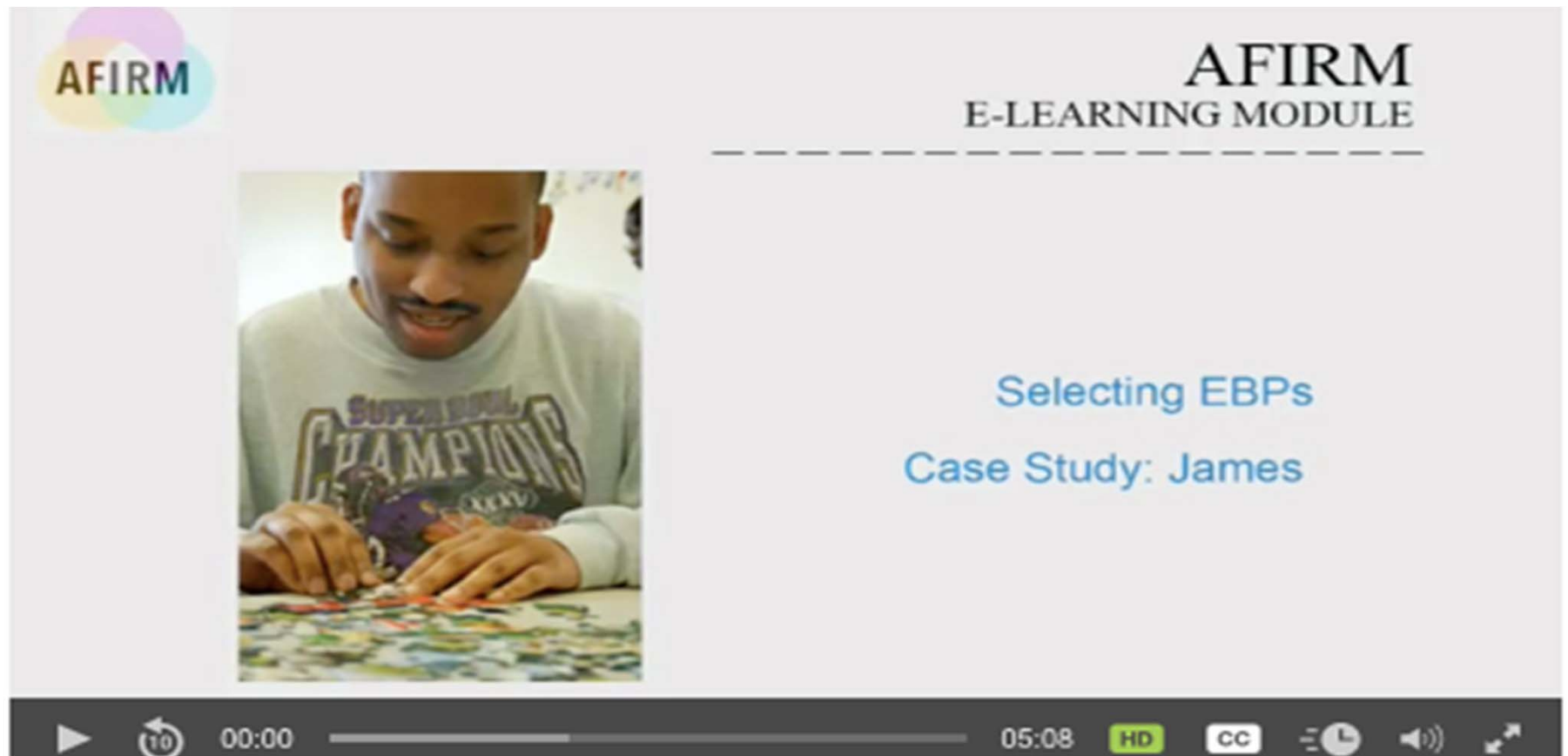| Evidence Based Practice and Abbreviated Definition	Social			Comm.			Beh.			Joint Attn.			Play			Cog.			School Ready			Acad.			Motor			Adapt.			Voc.			Mental Health		
	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22
Antecedent Based Intervention (ABI): *Arrangement of events preceding an interfering behavior to prevent or reduce occurrence*	G	Y	B	G	Y	B	G		B					Y						Y			Y	B	Y				Y							
Cognitive Behavioral Intervention (CBI): *Instruction on cognitive processes leading to changes in behavior*		Y							B								Y																		Y	
Differential Reinforcement of Alternative, Incompatible, or Other Behavior (DRA/I/O): *Consequences provided for desired behaviors that reduce the occurrence of interfering behaviors*	G	Y		G			G		B					Y					G				Y												B	
Discrete Trial Teaching (DTT): *Instructional process of repeated trials, consisting of instruction, response, and consequence*	G	Y		G				Y		G									G	G		G						G				Y				
Exercise (ECE): *Antecedent based physical exertion to reduce interfering behaviors or increase appropriate behaviors*								G									Y		G	G						Y										
Extinction (EXT): *Removal of existing reinforcement in order to reduce an interfering behavior*		Y		G	B		G		B					Y					G									G	Y							
Functional Behavior Assessment (FBA): *Systematic protocol designed to identify contingencies that maintain an interfering behavior*																			G																	
Function Communication Training (FCT): *Replacement of an interfering behavior with communication that accomplishes the same function*	G	Y				B	B						G	Y					G	Y																
Modeling (MD): *Demonstration of a desired behavior that results in skill acquisition through learner imitation*	G	Y	B	G	B					G				Y					G														B			
Naturalistic Intervention (NI): *Intervention strategies that occur with the learner's typical settings and routines*	G	Y		G	Y					G			G						G																	
Parent-Implemented Intervention (PII): *Parent delivered intervention learned through a structured parent training program*	G			G	Y		G	Y									G		G			G						G	Y							
Peer-Mediated Instruction and Intervention (PMII): *Typically developing peers are taught strategies that increase social learning opportunities in natural environments*	G	B		G									G	Y		G			G										Y	B						
Picture Exchange Communication System (PECS): *Systematic 6 phase protocol teaching the exchange of pictures between communicative partners*	G	Y		G	Y									Y																						

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Evidence Based Practice and Abbreviated Definition

Evidence by Developmental Domain and Age (years)

Evidence Based Practice and Abbreviated Definition	Social			Comm.			Beh.			Joint Attn.			Play			Cog.			School Ready			Acad.			Motor			Adapt.			Voc.			Mental Health		
	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22
Pivotal Response Training (PRT): *Pivotal learning variables guide intervention implemented in settings that build on learner interests and initiative*																																				
Prompting (PP): *Verbal, gestural, or physical assistance that supports skill acquisition*																																				
Reinforcement (R+): *A response occurring after a behavior resulting in an increased likelihood of future reoccurrence of the behavior*																																				
Response Interruption/Redirection (RIR): *Use of prompts or distracters during an interfering behavior that diverts attention and reduces the behavior*																																				
Scripting (SC): *A verbal or written model of a skill or situation that is practiced before use in context*																																				
Self Management (SM): *Instruction on discrimination between appropriate and inappropriate behaviors and accurate self-monitoring and rewarding of behaviors*																																				
Social Narratives (SN): *Descriptions of social situations with examples of appropriate responding*																																				
Social Skills Training (SST): *Direct instruction on social skills with rehearsal and feedback to increase positive peer interaction.*																																				
Structured Play Group (SPG): *Adult lead small group activities that include typically developing peers and use prompting to support performance*																																				
Task Analysis (TA): *The process of breaking a skill into small steps that are systematically chained together*																																				
Technology-Aided Instruction and Intervention (TAII): *Intervention using technology as a critical feature*																																				
Time Delay (TD): *Delaying a prompt during a practice opportunity in order to fade the use of prompts*																																				
Video Modeling (VM): *A video recording of a targeted skill that is viewed to assist in learning*																																				
Visual Support (VS): *Visual display that supports independent skill use.*																																				

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Selecting an EBP

Next, make a decision based on:

- The skills being taught

- Your professional wisdom

- The learner's learning style

- The learner's temperament

- The learner's interests and motivators

- Supports already in place

- History of what has and hasn't worked

Selecting EBPs

https://afirm.fpg.unc.edu/selecting-ebp

Let's Practice!

Goal: Lucia (age 8) will respond to peer's questions and comments with eye contact and appropriate phrases or sentences.

What is the goal we are targeting?

What are the options?

Evidence Based Practice and Abbreviated Definition	Evidence by Developmental Domain and Age (years)																																			
	Social			Comm.			Beh.			Joint Attn.			Play			Cog.			School Ready			Acad.			Motor			Adapt.			Voc.			Mental Health		
	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22	0-5	6-14	15-22
Antecedent Based Intervention (ABI): *Arrangement of events preceding an interfering behavior to prevent or reduce occurrence*	G	Y	B	G	G	B	G	G	B					Y						Y			Y	B		Y			Y							
Cognitive Behavioral Intervention (CBI): *Instruction on cognitive processes leading to changes in behavior*		Y			Y												Y																		Y	
Differential Reinforcement of Alternative, Incompatible, or Other Behavior (DRA/I/O): *Consequences provided for desired behaviors that reduce the occurrence of interfering behaviors*	G	Y		G	G		G	G	B					Y			Y		G	Y			Y			Y				B						
Discrete Trial Teaching (DTT): *Instructional process of repeated trials, consisting of instruction, response, and consequence*	G	Y		G	G		G							G			Y		G	G		G	Y			G			G			Y				
Exercise (ECE): *Antecedent based physical exertion to reduce interfering behaviors or increase appropriate behaviors*								G												G			Y													
Extinction (EXT): *Removal of existing reinforcement in order to reduce an interfering behavior*		Y		G		B			B					Y															G	Y						
Functional Behavior Assessment (FBA): *Systematic protocol designed to identify contingencies that maintain an interfering behavior*					Y														G	G		G	Y													
Function Communication Training (FCT): *Replacement of an interfering behavior with communication that accomplishes the same function*	G	Y		G	G	B	G	G					G	Y					G	Y		G	B													
Modeling (MD): *Demonstration of a desired behavior that results in skill acquisition through learner imitation*	G	Y	B	G		B					G			Y																			B			
Naturalistic Intervention (NI): *Intervention strategies that occur with the learner's typical settings and routines*	G	Y		G	G			G			G			G			G			G																
Parent-Implemented Intervention (PII): *Parent delivered intervention learned through a structured parent training program*	G	Y		G	G			Y			Y		G	G			G		G	G			Y						Y							
Peer-Mediated Instruction and Intervention (PMII): *Typically developing peers are taught strategies that increase social learning opportunities in natural environments*	G	B		G	G			Y					G	G			Y		G	Y			Y	B					Y	B						
Picture Exchange Communication System (PECS): *Systematic 6 phase protocol teaching the exchange of pictures between communicative partners*	G	Y		G	Y									Y																						

Legend: G = green, Y = yellow, B = blue (cell shading indicating evidence by domain and age).

Implementation Fidelity is Critical!

What does this mean?

"Implementing an intervention in the same manner in which it was done in the evidence-based research"

THE NATIONAL PROFESSIONAL DEVELOPMENT CENTER ON
AUTISM SPECTRUM DISORDERS

Implementation Fidelity is Critical!

How implementation fidelity achieved:

1. Use Implementation Checklists for the EBP to capture fidelity of implementation

2. Refer to EBP Fact Sheets

3. Use AFIRM self-learning modules on EBPs

4. Attend training on the EBPs

5. Access coaching on the EBP until fidelity is attained

THE NATIONAL PROFESSIONAL DEVELOPMENT CENTER ON
AUTISM SPECTRUM DISORDERS

How Can You Learn About the EBPs?

CAPTAIN
California Autism Professional Training
and Information Network

Home | About | News

Welcome

CAPTAIN is a multiagency network developed to support the understanding and use of Evidence Based Practices for individuals affected by Autism Spectrum Disorder across the state.

CAPTAIN is dedicated to the following:

- Providing statewide access to trainings and resources in Evidence Based Practices (EBPs) that are culturally sensitive, family centered, cost effective, and competency based.

Quick Links

National Professional Development Center On Autism Spectrum Disorders

AFIRM ASD Learning Modules

National Autism Center

Autism Internet Modules

FREE High Quality Training:
<u>A</u>utism <u>F</u>ocused <u>I</u>ntervention <u>R</u>esources and <u>M</u>odules (AFIRM)

Designed to help you learn the step-by-step process of planning for, using, and monitoring EBPs with learners with ASD from birth to 22 years of age
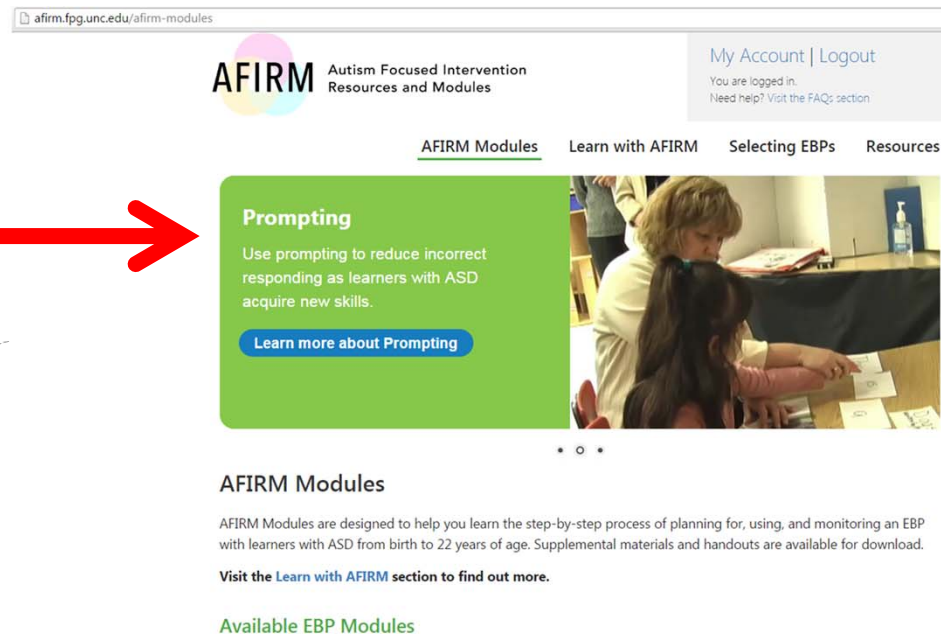
There's a Learning Module for each of the 27 EBPs

www.captain.ca.gov
http://afirm.fpg.unc.edu/afirm-modules

Autism Focused Intervention Resources and Modules: AFIRM

AFIRM Autism Focused Intervention Resources and Modules

- In each module:
  - Key components of an EBP including various ways to use it
  - Behaviors and skills that can be addressed using the practice
  - A step-by-step process for applying the practice
  - Downloadable resources

Professional Development Certificate

CEUs count for:
BCBA Type 2
ASHA CCCs

Certificate Track

- Case examples demonstrating the use of the EBP

- Multimedia presentation

- Pre-test required

- Post-assessment required

- Evaluation required

Non-Certificate Track

- Case examples demonstrating the use of the EBP

- Multimedia presentation

- Pre-test required

- Post-assessment optional

- Evaluation optional

Visual Support (VS)

Visual Support (VS)
---EBP Brief Packet---

Components of the EBP Brief Packet...

This evidence-based practice overview on Visual Support (VS) includes the following components:

1. **Overview:** A quick summary of salient features of the practice, including what it is, who it can be used with, what skills it has been used with, and settings for instruction.
2. **Evidence-base:** The *VS Evidence-base* details the NPDC criteria for inclusion as an evidence-based practice and the specific studies that meet the criteria for this practice.
3. **Step-by-Step Guide:** Use the *VS Step-by-Step Practice Guide* as an outline for how to plan for, use, and monitor VS. Each step includes a brief description as a helpful reminder while learning the process.
4. **Implementation Checklist:** Use the *VS Implementation Checklist* to determine if the practice is being implemented as intended.
5. **Data Collection Sheets:** Use the data collection sheets as a method to collect and analyze data to determine if progress is being made for a learner with ASD.
6. **Tip Sheet for Professionals:** Use the *VS Tip Sheet for Professionals* as a supplemental resource to help provide basic information about the practice to professionals working with the learner with ASD.
7. **Parent Guide:** Use the *VS Parent Guide* to help parents or family members understand basic information about the practice being used with their child.
8. **Additional Resources:** Use the *Additional Resources* to learn more about the practice.
9. **CEC Standards:** A list of *CEC Standards* that apply specifically to VS.
10. **Module References:** A list of numerical *References* utilized for the VS module.

Suggested citation:

Sam, A., & AFIRM Team. (2015). *Visual supports*. Chapel Hill, NC: National Professional Development Center on Autism Spectrum Disorder, FPG Child Development Center, University of North Carolina. Retrieved from http://afirm.fpg.unc.edu/visual-supports

This overview brief will support your use of the evidence-based practice: Visual Support.

For more information visit: www.afirm.fpg.unc.edu

Includes EBP BRIEF PACKET

AFIRM Resources

Select a key word to search for AFIRM resources or filter AFIRM resources by category.

Keyword Search

[   ]   **Apply**

Browse by Module

Antecedent-based Intervention

Exercise

Functional Behavior Assessment

Modeling

Peer-Mediated Instruction and Intervention

Picture Exchange Communication System

Prompting

Reinforcement

Self-management

Social Narratives

Social Skills Training

Task Analysis

Time Delay

Visual Supports

Browse by Module Lesson

Lesson 1 - Basics

Lesson 2 - Planning for the Practice

Lesson 3 - Using the Practice

Lesson 4 - Monitoring Progress

Additional Materials

Implementation Resources

Browse by Document Type

Evidence-base

Implementation checklist

Parent's guide

Professional standards

Step-by-Step practice guide

Tip sheet for professionals

EBP Brief Packet

Implementation Checklists

- Used to assist with planning for EBP use

- Helps implementers self reflect on fidelity of use

- Helps coaches give objective feedback

- Helps to prevent drift

Visual Supports (VS)
---Implementation Checklist---

Before you start:

Have you...

☐ Identified the behavior?

☐ Collected baseline data through direct observation?

☐ Established a goal or outcome that clearly states **when** the behavior will occur, **what** the target skill is, and **how** the team will know when the skill is mastered.

If the answer to any of these is "no", refer to the "Selecting EBPs" section on the website.

	Observation	1	2	3	4
	Date				
	Observer's Initials				
Step 1: Planning					
1.1	Identify visual supports needed to acquire or maintain target skills				
1.2	Develop/prepare visual support for learner based on individualized assessments				
1.3	Organize all needed materials				
Step 2: Using					
2.1	Teach learner how to use visual support				
	- *Boundaries:*				
	☐ Introduce boundary to learner				
	☐ Use modeling to teach learner to stay within boundary				
	☐ Use reinforcement to encourage learner to stay within boundary				
	☐ Use corrective feedback when learner does not stay within boundary				
	- *Cues:*				
	☐ Show learner visual cue				
	☐ Stand behind learner when prompting use of visual cue				
	☐ Use concise, relevant words/terms while teaching visual cue				
	☐ Assist learner in participating in activity/event with visual cue				
	- *Schedules*				
	☐ Stand behind learner when prompting use of visual schedule				
	☐ Place schedule information in learner's hand				
	☐ Use concise, relevant words/terms				
	☐ Assist learner in getting to designated activity/location, and prompt use				
	☐ Ensure learner remains in scheduled location until prompted to use				
	☐ Repeat steps until learner is able to complete the sequence independently across activities/locations				
2.3	Use visual supports consistently and across settings				
Step 3: Monitoring					
3.1	Collect data on target behaviors and use of visual supports (independence during use and progress through forms/types of supports)				
3.2	Determine next steps based on learner progress				

AFIRM Autism Focused Intervention Resources and Modules

Data Forms

Functional Communication

---Replacement Communicative Behavior Data Collection---

Learner's Name: _____ Date/Time: _____

Observer(s): _____

Data Collection for Replacement Communicative Behavior:

Use this form when collecting data on learner's use of the target communicative behavior.

Interfering Behavior (IB):						
Replacement Communicative Behavior (RCB):						
Date	Location	Antecedent	IB or RCB	Prompt Needed	Consequence	Notes

Prompt Key: VP = Verbal Prompt, VC = with Visual Cue, GP = Gestural Prompt, PP = with Partial Physical, FP = Full Physical, I = Independently.

For more information, visit: www.afirm.fpg.unc.edu

NPDC-ASD Early Start Website
http://asdtoddler.fpg.unc.edu

THE MOST IMPORTANT REASON TO USE EVIDENCE BASED PRACTICES/INTERVENTONS?

Because They Work!!!!! ☺

LTSAE

CDC's **"Learn the Signs. Act Early."** program aims to improve early identification of children with autism and other developmental disabilities so children and families can get the services and support they need.

LTSAE Materials

Designed for use by:

Parents
- Books, growth chart

Professionals
- How to discuss milestones
- Tip sheets

Parents and Professionals
- Tracking tools

CAPTAIN Regional Brochures

http://www.captain.ca.gov/LTSAE-brochures.html

www.captain.ca.gov

Use these **Quick Links** on the CAPTAIN website to access these EBP resources!

Home

Welcome

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AFIRM ASD Learning Modules

National Autism Center

Autism Internet Modules

Wrap Up

Unless you're using evidence-based procedures, I can't hear a word you're saying.

STAY CONNECTED and UP-TO-DATE!
Follow us! Like us!

www.captain.ca.gov

"Children and families cannot benefit from evidence-based practices that they do not experience."

-Dean Fixsen, NIRN, 2006